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EXAMINER	
GOFMAN, ALEX N	

ART UNIT	PAPER NUMBER
2169	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/792,122	ANTOCH, STEVEN T.	
	Examiner	Art Unit	
	Alex Gofman	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is the initial Office action based on the application filed on March 3, 2004. **Claims 1-19** are currently pending and have been considered below.

Claim Objections

1. **Claims 5, 6, 7, 13, 14, and 15** are objected to because of the following informalities: In the specification a "typed model element field handler subclass" is defined as an abstract class that implements all methods defined as abstract. However, by its definition, an abstract class does not implement any methods. Only its subclasses, which are not abstract, implement the methods from the parent class. An abstract class may declare other abstract classes, but not implement them. Herein, the term "typed model element field handler subclass" will be used as an abstract class, which declares subclasses that implement methods declared in the parent class.

Claim 10 lacks antecedent basis from the specification because the specification does not disclose using a root of a tree structure.

Claims 14 and 15 are currently written as depended on Claim 12. However, they should be dependent on Claim 13 since Claim 13 discloses a typed model element field handler subclass. Thus, Claims 14 and 15 will be treated as dependent on Claim 13. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Both of the independent claims present an arrangement of data on a computer readable medium. An arrangement of data is considered nonfunctional descriptive material. When nonfunctional descriptive material

is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored in a computer-readable medium, in a computer, on an electromagnetic carrier signal does not make it statutory.

Claim 16 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 9 and 10** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In part (a) of Claim 9, and in Claim 10 a tree structured is mentioned. However, the tree structure as described in the specification does not seem to be a tree structure. Rather, it describes various associations, relations between elements or a hierarchical structure and thus will be treated as a relational diagram.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4, 8-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Brumme et al (6,134,559).

Claim 1: Brumme discloses a computer-readable medium having stored thereon a data structure, the data structure separating storage of an attribute value from handling of the attribute value, the data structure comprising:

a. A model element class for implementing the constructs described by meta-data; the model element class storing an attribute value (Col 3 ln 17-30, Col 22 ln 32-63).

b. A meta-attribute information object for describing attributes of the model element class (Col 32 ln 49-67, Col 33 ln 1-13). [Meta data about attributes describes meta-attribute information.]

c. A model element field handler object for accessing the attribute value stored in the model element class (Col 14 ln 51-65). [The handler is able to set properties in a class and therefore it accesses the class.]

Claim 4: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the model element field handler object sets the attribute value sorted in the model element class (Col 14 ln 51-65).

Claim 8: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the data structure further comprises a meta-class information object for storing data associated with the model element (Col 3 ln 54-67).

Claim 9: Brumme discloses a computer-readable medium having stored thereon a data structure, the data structure separating storage of an attribute value from handling of the attribute value, the data structure comprising:

a. A container for storing meta-data in a tree structure (Col 12 ln 54-61, Col 13 ln 41-64). [Brumme describes a relationship and association between objects. An association between objects, according to Brumme, may be considered as one object describing another object and thus form a metadata relationship. Please see the 112 rejection for explanation about the tree.]

b. A model element class for implementing the constructs described by meta-data; the model element class storing an attribute value (Col 3 ln 17-30, Col 22 ln 32-63).

c. A meta-class information object for storing data associated with the model element (Col 3 ln 54-67).

d. A meta-attribute information object for describing attributes of the model element class (Col 32 ln 49-67, Col 33 ln 1-13). [Meta data about attributes describes meta-attribute information.]

e. A model element field handler object for accessing the attribute value stored in the model element class (Col 14 ln 51-65). [The handler is able to set properties in a class and therefore it accesses the class.]

Claim 10: Brumme discloses the computer-readable medium of Claim 9 above and further discloses wherein the container comprises a store acting as the root of the tree structure (Col 12 ln 54-61, Col 13 ln 41-64, Col 7 ln 54-60). [As per 112 rejection above, the structure is not being considered as a tree and thus the claim will be interpreted as having a container that comprises a store.]

Claim 12: Brumme discloses the computer-readable medium of Claim 1 above and further discloses wherein the model element field handler object sets the attribute value stored in the model element class (Col 14 ln 51-65).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Mathews et al (2003/0163479).

Claim 2: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the attribute value is stored in a private member field of the model element class. However, Mathews discloses using a private method (Figure 5, paragraph 0067). It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a private member field in Brumme. One would have been motivated to do so to give only certain methods or users the right to access that particular method, function or attribute.

8. Claims 3, 5, 6, 7, 11, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Coad et al (6,851,105).

Claim 3: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the model element field handler object comprises a singleton pattern. However, Coad discloses using a singleton pattern (Col 8 ln 29-47). A singleton pattern, according to Coad, is a class with only one instance and contains only provides a global point of access to it. It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a singleton pattern in Brumme. One would have been motivated to do so in order to have only one instance of a class, and thereby using only the single object to coordinate actions across a system.

Claim 5: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose wherein the model element field handler comprises a typed model element field handler subclass. A typed model element field handler subclass is defined by the applicant as an abstract class that implements methods defined in the abstract class. (Please see the Claim Objection related to this claim above.) Coad discloses using an abstract class, in the form of an interface class, which defines methods within its class (Col 1 ln 44-67). It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the model element field handler comprise a subclass that is an abstract class to implement methods declared in the parent class in Brumme. One would have been motivated to do so in order for unrelated classes to be able to interact with one another.

Claims 6 and 7: Brumme and Coad disclose the computer-readable medium of Claim 5 above, and Brumme further discloses wherein the typed model element field handler subclass defines a get value function for accessing the attribute value and a set value function for setting the attribute value (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10). [Get and set functions are common generic functions are used to get or set values for attributes in classes, subclasses, or just with regular functions.]

Claim 11: Brumme discloses the computer-readable medium of Claim 9 above, but does not explicitly disclose wherein the model element field handler object comprises a singleton pattern. However, Coad discloses using a singleton pattern (Col 8 ln 29-47). A singleton pattern, according to Coad, is a class with only one instance and contains only provides a global point of access to it. It would have been obvious for one of ordinary skill in the art at the time the invention was made to use a singleton pattern in Brumme. One would have been motivated to do so in order to have only one instance of a class, and thereby using only the single object to coordinate actions across a system.

Claim 13: Brumme discloses the computer-readable medium of Claim 1 above, but does not explicitly disclose Brumme discloses the computer-readable medium of Claim 9 above, but does not explicitly disclose wherein the model element field handler comprises a typed model element field handler subclass. A typed model element field handler subclass is defined by the applicant as an abstract class that implements methods defined in the abstract class. (Please see the Claim Objection related to this claim above.) Coad discloses using an abstract class, in the form of an interface class, which defines methods within its class (Col 1 ln 44-67). It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the model element field handler comprise a subclass that is an abstract class to implement methods declared in the parent class in Brumme. One would have been motivated to do so in order for unrelated classes to be able to interact with one another.

Claims 14 and 15: Brumme and Coad disclose the computer-readable medium of Claim 13 above, and Brumme further discloses wherein the typed model element field handler subclass defines a get value function for accessing the attribute value and

a set value function for setting the attribute value (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10). [Get and set functions are common generic functions are used to get or set values for attributes in classes, subclasses, or just with regular functions.]

9. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brumme et al (6,134,559) in view of Brogden et al (Java 2 Programmer Exam Cram 2)

Claim 16: Brumme and Brogden disclose a method of accessing an attribute value within a data structure, the data structure separating storage of the attribute value from handling of the attribute value, the method comprising:

a. Storing the attribute value in a private member field of a model element class. Brumme does not explicitly disclose using a private member field, however, Brogden does (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to store the attribute value in a private member field of a model element class in Brumme. One would have been motivated to do so in order to limit access to a specified attribute.

b. Brumme discloses using a handler class, but does not explicitly disclose declaring a nested handler class, the nested handler class being a subclass of a generic handler class. However, Brogden discloses the reasoning to use nested classes (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to declare a nested handler class, the nested handler class being a subclass of a generic handler class in Brumme. One would have been motivated to do so in order to be able to use a certain functionality of a class from within another class without complicating the inheritance hierarchy of either class.

c. Brumme discloses issuing a get value function to obtain the attribute value from the model element class (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10).

d. Brumme discloses receiving the attribute value from the model element class (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10). [A get function is what retrieves the attribute function.]

Claim 17: Brumme and Brogden disclose the method of Claim 16 above, but Brumme does not explicitly disclose wherein the nested handler class inherits base

functionality from the generic handler class. However, Brogden discloses the explanation of using nested classes (Chapter 5 Sec 2). When nested classes are used, they inherit information from it's parent class or class it was nested from. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have the nested handler class inherits base functionality from the generic handler class in Brumme. One would have been motivated to do so because nested classes always inherit information from the class it is nested from.

Claim 18: Brumme and Brogden disclose a method of setting an attribute value within a data structure, the data structure separating storage of the attribute value from handling of the attribute value, the method comprising:

a. Brumme discloses using a handler class, but does not explicitly disclose declaring a nested handler class, the nested handler class being a subclass of a generic handler class. However, Brogden discloses the reasoning to use nested classes (Chapter 5 Sec 2). It would have been obvious for one of ordinary skill in the art at the time the invention was made to declare a nested handler class, the nested handler class being a subclass of a generic handler class in Brumme. One would have been motivated to do so in order to be able to use a certain functionality of a class from within another class without complicating the inheritance hierarchy of either class

b. Brumme discloses issuing a set value function to set the attribute value for the model element class (Col 13 ln 41-64, Col 25 ln 54-67, Col 26 ln 1-10).

c. Brumme discloses setting the attribute value (Col 14 ln 51-64). [A set function sets the attribute value.]

d. Brumme discloses storing the attribute value in the model element class (Col 3 ln 17-30, Col 14 ln 51-64). [Once an attribute value is set, it is stored in a specified object or class.]

Claim 19: Brumme and Brogden disclose a method as in Claim 18 above, but Brumme does not explicitly disclose wherein the nested handler class inherits base functionality from the generic handler class. However, Brogden discloses the explanation of using nested classes (Chapter 5 Sec 2). When nested classes are used, they inherit information from it's parent class or class it was nested from. It would have

been obvious for one of ordinary skill in the art at the time the invention was made to have the nested handler class inherits base functionality from the generic handler class in Brumme. One would have been motivated to do so because nested classes always inherit information from the class it is nested from.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Gofman whose telephone number is (571)270-1072. The examiner can normally be reached on Mon-Fri 9am-3pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chace can be reached on (571)272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AG
9-27-06

Christian Chace
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